Amendments to the Claims:

Following is a complete listing of the claims pending in the application, as amended:

1–42. (Cancelled)

43. (New) An automated analytical system for sequential-injection sample analysis, the automated analytical system comprising:

(a) a multipositional stream-selection device;

(b) a fluid-propulsion device, in fluid communication with the multipositional stream-selection device, for conveying a fluid to and from the multipositional stream-selection device;

(c) a source of sample, in fluid communication with the multipositional stream-selection device;

(d) a source, in fluid communication with the multipositional stream-selection device, of a reagent capable of reacting with a component of the sample to yield a reaction product detectable by the automated analytical system;

(e) a detector, in fluid communication with the multipositional stream-selection device, for generating a signal indicative of concentration of the component of the sample; and

(f) a programmable central processing unit, operatively connected to the multipositional stream-selection device, and constructed and arranged for automatic control of fluid flow between the multipositional stream-selection device, the sample source, the reagent source, and the detector by grouping device events together to form tasks, creating an electronic task manager as an electronic queue having a back and a front, adding new tasks to the back of the queue, retrieving next task for execution from the front of the queue, executing the task, and retrieving the next task from the front of the queue.

44. (New) The automated analytical system of claim 43, further comprising:

(a) a programmable electronic sequence controller, operationally connected to the central processing unit, for automatically determining sequence of events required in performing a plurality of different tasks.

45. (New) A programmable electronic controller for an automated analytical system, the controller comprising:

a programmable electronic central processing unit constructed and arranged to create an electronic task manager as an electronic queue having a back and a front, to group device events together to form tasks, to add new tasks to the back of the queue, to retrieve a next task for execution from the front of the queue, to execute the retrieved task, and to retrieve the next task from the front of the queue.

46. (New) The programmable electronic controller of claim 45, further comprising:

a programmable electronic sequence controller, operationally connected to the central processing unit, and constructed and arranged to automatically determine sequence of events required in performing a plurality of tasks.

47. (New) An automated analytical system for sequential-injection sample analysis, the automated analytical system comprising:

(a) a multipositional stream-selection device;

(b) a fluid-propulsion device, in fluid communication with the multipositional stream-selection device, for conveying a fluid to and from the multipositional stream-selection device;

(c) a source of sample, in fluid communication with the multipositional stream-selection device;

(d) a reservoir containing a lyophilized or a concentrated reagent which, when dissolved in or diluted by a solvent, forms a reconstituted reagent that is capable of reacting with a component of the sample to form a reaction product detectable by the automated analytical system;

(e) a source of solvent, in fluid communication with the multipositional stream-selection device, for dissolving or diluting the lyophilized or concentrated reagent;

(f) a detector, in fluid communication with the multipositional stream-selection device, for generating a signal indicative of concentration of the component of the sample; and

(g) a central processing unit, operatively connected to the multipositional stream-selection device, and constructed and arranged for automatic control of fluid flow between the multipositional stream-selection device, the sample source, the reservoir containing the lyophilized or concentrated reagent, the solvent source, and the detector.

48. (New) The automated analytical system of claim 47, wherein the reagent reservoir includes a porous frit, to facilitate mixing of the solvent with the lyophilized or concentrated reagent, and to prevent residual solids from being drawn from the reagent reservoir with the reconstituted reagent.